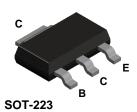


NZT751



PNP Current Driver Transistor

This device is designed for power amplifier, regulator and switching circuits where speed is important. Sourced from Process 5P.

Absolute Maximum Ratings*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V _{CEO}	Collector-Emitter Voltage	60	V
V _{CBO}	Collector-Base Voltage	80	V
V _{EBO}	Emitter-Base Voltage	5.0	V
I _C	Collector Current - Continuous	4.0	Α
T _J , T _{stg}	Operating and Storage Junction Temperature Range	-55 to +150	°C

^{*}These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:

1) These ratings are based on a maximum junction temperature of 150 degrees C.

2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

TA = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
		*NZT751	
P _D	Total Device Dissipation	1.2	W
	Derate above 25°C	9.7	mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	103	°C/W

Device mounted on FR-4 PCB 36 mm X 18 mm X 1.5 mm; mounting pad for the collector lead min. 6 cm².

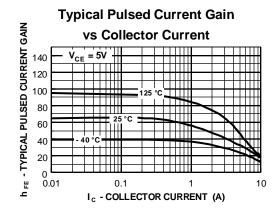
PNP Current Driver Transistor

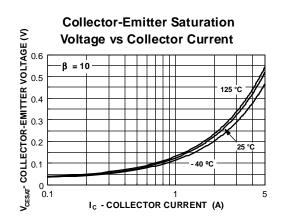
(continued)

				T	T
Symbol	Parameter	Test Conditions	Min	Max	Units
OFF CHA	RACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Sustaining Voltage	$I_C = 10 \text{ mA}, I_B = 0$	60		V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	$I_C = 100 \mu A, I_E = 0$	80		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 10 \mu A, I_C = 0$	5.0		V
I _{CBO}	Collector-Cutoff Current	$V_{CB} = 80 \text{ V}, I_{E} = 0$		100	nA
I _{EBO}	Emitter-Cutoff Current	$V_{EB} = 4.0 \text{ V}, I_{C} = 0$		0.1	μΑ
hee	RACTERISTICS*	I _C = 50 mA. V _{CE} = 2.0 V	75		1
h _{FE}	DC Current Gain	$I_{C} = 50 \text{ mA}, V_{CE} = 2.0 \text{ V}$	75		
h _{FE}		$I_C = 500 \text{ mA}, V_{CE} = 2.0 \text{ V}$	75		
h _{FE}		, 52	_		
		$\begin{split} I_{C} &= 500 \text{ mA}, \text{ V}_{CE} = 2.0 \text{ V} \\ I_{C} &= 1.0 \text{ A}, \text{ V}_{CE} = 2.0 \text{ V} \\ I_{C} &= 2.0 \text{ A}, \text{ V}_{CE} = 2.0 \text{ V} \\ I_{C} &= 1.0 \text{ A}, \text{ I}_{B} = 100 \text{ mA} \end{split}$	75 75	0.3	V
V _{CE(sat)}	DC Current Gain Collector-Emitter Saturation Voltage	$\begin{split} & I_{C} = 500 \text{ mA}, \ V_{CE} = 2.0 \text{ V} \\ & I_{C} = 1.0 \text{ A}, \ V_{CE} = 2.0 \text{ V} \\ & I_{C} = 2.0 \text{ A}, \ V_{CE} = 2.0 \text{ V} \\ & I_{C} = 1.0 \text{ A}, \ I_{B} = 100 \text{ mA} \\ & I_{C} = 2.0 \text{ A}, \ I_{B} = 200 \text{ mA} \end{split}$	75 75	0.5	V
V _{CE(sat)}	DC Current Gain Collector-Emitter Saturation Voltage Base-Emitter Saturation Voltage	$\begin{split} I_{C} &= 500 \text{ mA}, V_{CE} = 2.0 \text{ V} \\ I_{C} &= 1.0 \text{ A}, V_{CE} = 2.0 \text{ V} \\ I_{C} &= 2.0 \text{ A}, V_{CE} = 2.0 \text{ V} \\ I_{C} &= 1.0 \text{ A}, I_{B} = 100 \text{ mA} \\ I_{C} &= 2.0 \text{ A}, I_{B} = 200 \text{ mA} \\ I_{C} &= 1.0 \text{ A}, I_{B} = 100 \text{ mA} \end{split}$	75 75	0.5 1.2	V
V _{CE(sat)}	DC Current Gain Collector-Emitter Saturation Voltage	$\begin{split} & I_{C} = 500 \text{ mA}, \ V_{CE} = 2.0 \text{ V} \\ & I_{C} = 1.0 \text{ A}, \ V_{CE} = 2.0 \text{ V} \\ & I_{C} = 2.0 \text{ A}, \ V_{CE} = 2.0 \text{ V} \\ & I_{C} = 1.0 \text{ A}, \ I_{B} = 100 \text{ mA} \\ & I_{C} = 2.0 \text{ A}, \ I_{B} = 200 \text{ mA} \end{split}$	75 75	0.5	V
V _{CE(sat)}	DC Current Gain Collector-Emitter Saturation Voltage Base-Emitter Saturation Voltage	$\begin{split} I_{C} &= 500 \text{ mA}, V_{CE} = 2.0 \text{ V} \\ I_{C} &= 1.0 \text{ A}, V_{CE} = 2.0 \text{ V} \\ I_{C} &= 2.0 \text{ A}, V_{CE} = 2.0 \text{ V} \\ I_{C} &= 1.0 \text{ A}, I_{B} = 100 \text{ mA} \\ I_{C} &= 2.0 \text{ A}, I_{B} = 200 \text{ mA} \\ I_{C} &= 1.0 \text{ A}, I_{B} = 100 \text{ mA} \end{split}$	75 75	0.5	V
$V_{CE(sat)}$ $V_{BE(sat)}$ $V_{BE(on)}$	DC Current Gain Collector-Emitter Saturation Voltage Base-Emitter Saturation Voltage	$\begin{split} I_{C} &= 500 \text{ mA}, V_{CE} = 2.0 \text{ V} \\ I_{C} &= 1.0 \text{ A}, V_{CE} = 2.0 \text{ V} \\ I_{C} &= 2.0 \text{ A}, V_{CE} = 2.0 \text{ V} \\ I_{C} &= 1.0 \text{ A}, I_{B} = 100 \text{ mA} \\ I_{C} &= 2.0 \text{ A}, I_{B} = 200 \text{ mA} \\ I_{C} &= 1.0 \text{ A}, I_{B} = 100 \text{ mA} \end{split}$	75 75	0.5	V

^{*}Pulse Test: Pulse Width \leq 300 μ s, Duty Cycle \leq 2.0%

DC Typical Characteristics

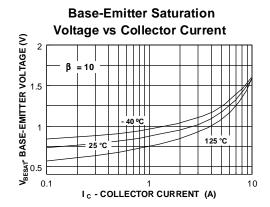


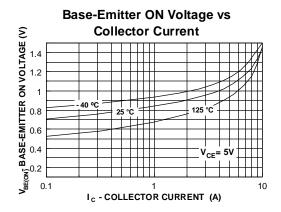


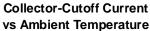
PNP Current Driver Transistor

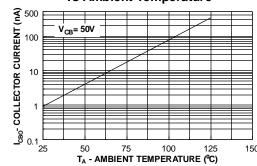
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DC Typical Characteristics (continued)









AC Typical Characteristics

POWER DISSIPATION vs AMBIENT TEMPERATURE

